Claims

[c1] 1. A computer-based method for a multiparty electronic service, the method comprising steps of:
negotiating a machine interpretable service specification between all parties, which would cooperate with a particular application running on a host system;
defining said service specification to:
identify cooperating parties;
identify a requestor and format of a service request, said request is adapted to contain information about an individual;
conduct conditional processing steps required for said service request, said conditional processing steps is adapted to use stored data about said individual; and
provide conditional notifications, said notifications is adapted to include additional information about the individual described in the request;
providing a secure computation environment in said host system;
uploading said service specification into said secure computation environment;
enforcing said service specification with regards to all cooperating parties;receiving a service request from said requestor;
providing a secure co-processor in said secure computation environment for processing said service request, where said secure processing includes:
determining the service specification that governs said service request;
validating the actual requestor and the content of the service request against an expected requestor and expected contents as defined in the service specification; and
executing the conditional processing and the notifications as defined in the service specification.

[c2] 2. The method of claim 1 further comprising the step of allowing at least one party of said cooperating parties to cancel said service specification wherein all future service requests that rely on said cancelled service specification will be rejected.

[c3] 3. The method of claim 2 wherein said steps of negotiating a machine interpretable service specification, uploading, enforcing, receiving a service

request, and canceling said service specification comprises the step of conducting said previous steps multiple times.

[c4] 4. The method of claim 1 further comprising the steps of:
negotiating multiple machine interpretable service specifications;
defining said multiple service specifications;
uploading said multiple service specifications into said secure computation environment; and
enforcing said multiple service specifications with regards to all cooperating parties.

[c5] 5. The method of claim 4 wherein said secure processing steps further comprises the step of having at least one of said secure processing steps being executed unconditionally.

[c6] 6. The method of claim 1 wherein said secure processing steps further comprises the step of having at least one of said secure processing steps use data provided in said service request and found in said host system to derive further information about said individual described in said service request.

[c7] 7. The method of claim 6 wherein said at least one of said secure processing steps further comprises the step of computing a correlation between biometric data provided in said service request and biometric data looked up in said host system.

[c8] 8. The method of claim 1 wherein said step of providing conditional notifications further comprises the step of providing an empty message.

[c9] 9. The method of claim 1 wherein said step of negotiating a machine interpretable service specification between all parties further comprises the step of providing a contract for governing the negotiated service specification.

[c10] 10. The method of claim 1 wherein said secure processing steps further comprises the step of notifying said requestor that said service request was processed.

[c11] 11. The method of claim 1 wherein said step of enforcing said service

specification further comprises the step of uploading at least one database from at least one party of said cooperating parties, information contained therein from said at least one database is stored in said host system.

[c12] 12. The method of claim 4 wherein said step of negotiating multiple machine interpretable service specifications between any cooperating parties further comprises the step of providing a contract for governing each negotiated service specification.

[c13] 13. The method of claim 1 wherein said step of providing conditional notifications further comprises the step of providing a notification that is adapted to contain information about said individual.

[c14] 14. The method of claim 13, wherein said step of providing a notification that is adapted to contain information about said individual further comprises the step of providing said notification to at least one party of said cooperating parties, said at least one party of said cooperating parties is a party other than said requestor.

[c15] 15. The method of claim 14, wherein said step of providing a notification to at least one party of said cooperating parties that is adapted to contain information about said individual further comprises the step of providing notification to said at least one party of said cooperating parties that is a party other than a provider of said stored data.

[c16] 16. The method of claim 1 wherein said step of providing conditional notifications further comprises the step of providing a notification to at least one party of said cooperating parties that is adapted to contain no information about said individual.

[c17] 17. Apparatus for a multiparty electronic service, the apparatus comprising: at least one host computer adapted to have at least one secure co-processor operating in a secure computation environment, said at least one host computer operative to: negotiate a machine interpretable service specification between all parties, which would cooperate with a particular application running on said host computer; upload said service specification into said secure computation

environment; enforce said service specification with regards to all cooperating parties; receive a service request from a requestor; execute secure processing of said service request; and provide notifications as defined in the service specification.

[c18] 18. The apparatus of claim 17, wherein said at least one host computer is further operative to define said service specification to:
identify said cooperating parties;
identify said requestor and the format of said service request, said request is adapted to contain information about an individual;
conduct conditional processing steps required for said service request, said conditional processing steps is adapted to use stored data about said individual; and
provide conditional notifications, said conditional notifications is adapted to include additional information about the individual described in the request.

[c19] 19. The apparatus of claim 17 wherein said at least one host computer is further operative to execute said secure processing to:
determine the service specification that governs said service request;
validate said requestor and the content of the service request against an expected requestor and expected contents as defined in the service specification; and
execute conditional processing as defined in the service specification.

[c20] 20. The apparatus of claim 17 wherein said at least one host computer is further operative to provide said notifications as conditional notifications that is adapted to include additional information about an individual described in the request.

[c21] 21. The apparatus of claim 17 wherein said at least one host computer is further operative to provide a contract for governing the negotiated service specification.

[c22] 22. The apparatus of claim 17 wherein said at least one host computer operative to negotiate said machine interpretable service specification, upload

said service specification, enforce said service specification, and receive a service request, is further operative to conduct said negotiating, uploading, enforcing and receiving functions multiple times.

[c23] 23. The apparatus of claim 17 wherein said at least one host computer is further operative to use data provided in said service request and found in said host computer to derive further information about an individual described in said service request.

[c24] 24. The apparatus of claim 23 wherein said at least one host computer is further operative to compute a correlation between biometric data provided in said service request and biometric data looked up in said host computer.

[c25] 25. The apparatus of claim 17 wherein said at least one host computer is further operative to compute a correlation between biometric data provided in said service request and biometric data looked up in said host computer.

[c26] 26. The apparatus of claim 17 wherein said at least one host computer operative to provide notifications is further operative to provide an empty message.

[c27] 27. The apparatus of claim 17 wherein said at least one host computer is further operative to upload at least one database from at least one party of said cooperating parties, information contained therein from said at least one database is adapted to be stored in said host computer.

[c28] 28. The apparatus of claim 17 wherein said at least one host computer operative to negotiate a machine interpretable service specification between all parties is further operative to: negotiate multiple machine interpretable service specifications; define said multiple service specifications; upload said multiple service specifications into said secure computation environment; and enforce said multiple service specifications with regards to all cooperating parties.

[c29] 29. The apparatus of claim 17 wherein said at least one host computer operative to provide notifications is further operative to notify said requestor

that said service request was processed.

[c30] 30. The apparatus of claim 27 wherein said at least one host computer operative to provide notifications is further operative to provide conditional notifications that is adapted to contain information about an individual.

[c31] 31. The apparatus of claim 18 wherein said at least one host computer is further operative to provide said conditional notifications to another party of said cooperating parties, said another party of said cooperating parties is a party other than said requestor.

[c32] 32. The method of claim 31, wherein said at least one host computer operative to provide said conditional notifications to said another party of said cooperating parties
is further operative to provide said conditional notifications to a party other than a provider of said stored data.

[c33] 33. An identification apparatus for matching individuals, the apparatus comprising:
at least one host computer adapted to have at least one secure co-processor operating in a secure computation environment, said at least one host computer operative to: negotiate a machine interpretable contract between all parties, which would cooperate with a particular application running on said host computer; upload said contract into said secure computation environment; enforce said contract with regards to all cooperating parties; receive a service request from a requestor; execute secure processing of said service request; and provide notifications as defined in the contract.

[c34] 34. An article of manufacture for use in a multiparty electronic service, comprising a machine readable medium tangibly embodying a program of instructions executable by a machine for implementing a method, the method comprising steps of:
negotiating a machine interpretable service specification between all parties, which would cooperate with a particular application running on a host system;
defining said service specification to:

identify cooperating parties;
identify a requestor and format of a service request, said request is adapted to contain information about an individual;
conduct conditional processing steps required for said service request, said conditional processing steps is adapted to use stored data about said individual; and
provide conditional notifications, said notifications is adapted to include additional information about the individual described in the request;
providing a secure computation environment in said host system;
uploading said service specification into said secure computation environment;
enforcing said service specification with regards to all cooperating parties;receiving a service request from said requestor;
providing a secure co-processor in said secure computation environment for processing said service request, where said secure processing includes:
determining the service specification that governs said service request;
validating the actual requestor and the content of the service request against an expected requestor and expected contents as defined in the service specification; and
executing the conditional processing and the notifications as defined in the service specification.

[c35]

35. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform methods steps for managing a matching identification service, the method comprising the steps of:
negotiating a machine interpretable service specification between all parties, which would cooperate with a particular application running on a host system;
defining said service specification to:
identify cooperating parties;
identify a requestor and format of a service request, said request is adapted to contain information about an individual;
conduct conditional processing steps required for said service request, said conditional processing steps is adapted to use stored data about said individual;

and

provide conditional notifications, said notifications is adapted to include additional information about the individual described in the request;

providing a secure computation environment in said host system;

uploading said service specification into said secure computation environment;

enforcing said service specification with regards to all cooperating parties;receiving a service request from said requestor;

providing a secure co-processor in said secure computation environment for processing said service request, where said secure processing includes:

determining the service specification that governs said service request;

validating the actual requestor and the content of the service request against an expected requestor and expected contents as defined in the service specification; and

executing the conditional processing and the notifications as defined in the service specification.